UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,463	08/19/2003	Jeffrey Scott Brown	03-0058	4100

7590   11/14/2005

LSI Logic Corporation
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Intellectual Property Services Group
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EXAMINER
TO, TUYEN P

ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/643,463	BROWN, JEFFREY SCOTT
	Examiner	Art Unit
	Tuyen To	2825 77

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *19 August 2003*.

2a) ☐ This action is **FINAL**.　　　2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-18* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-4,7-14, and 17-18* is/are rejected.

7) ☒ Claim(s) *5-6 and 15-16* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *19 August 2003* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All　b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

This is a response to the communication filed on 08/19/2003. **Claims 1-18** are
pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that
form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b),
> by another filed in the United States before the invention by the applicant for patent or (2) a
> patent granted on an application for patent by another filed in the United States before the
> invention by the applicant for patent, except that an international application filed under the treaty
> defined in section 351(a) shall have the effects for purposes of this subsection of an application
> filed in the United States only if the international application designated the United States and
> was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7-14, and 17-18 are rejected under 35 U.S.C. 102(e) as being
anticipated by **Monzel, III et al. (Monzel) (US Patent No. 6864716).**

Referring to claim 1, Monzel discloses a method for providing a metal
programmable device, the method comprising:

providing an array of programmable cells (*Claim1, step 1*);

providing an array of pre-diffused memory cells (*Claim 1, step2*);

providing a plurality of memory interface control blocks, wherein each memory
interface control block accesses the pre-diffused memory cells as a different memory
type (*in Abstract; Fig. 3E, col. 4, lines 23-50, Monzel discloses a plurality of peripheral
logic blocks (" memory interface control block") may be used to configured to access the
core memory cell as various memory types);* and

connecting a first memory interface control block from within the plurality of
memory interface control blocks to a first portion of the memory cells (*In Fig. 3C, col. 3,
lines 45-47, Monzel discloses the peripheral logic within 324, "a first memory interface
control block", is configured/connected to access memory 1*), wherein logic within the
array of programmable cells accesses at least a first portion of the array of pre-diffused

memory cells as a first memory type using the first memory interface control block (*In Fig. 3C, col. 3, lines 35+, Monzel discloses some/all of logic of element 324 ("a first memory interface control block") access a first portion of memory core*).

Referring to claim 2, Monzel discloses the method of claim 1, wherein the step of connecting the first memory interface control block to the memory cells is performed by applying a metal layer (*claims 2-3*).

Referring to claim 3, Monzel discloses the method of claim 1, further comprising:

connecting a second memory interface control block from within the plurality of memory interface control blocks to a second portion of the memory cells, wherein logic within the array of programmable cells accesses at least a second portion of the array of pre-diffused memory cells as a second memory type using the second memory interface control block (*claims 6 and 8*).

Referring to claim 4, Monzel discloses the method of claim 3, wherein the steps of connecting the second memory interface control block to the memory cells is performed by applying a metal layer (*claim 6-7*).

Referring to claim 7, Monzel discloses the method of claim 1, wherein the first memory type is one of a single port random access memory, a dual port random access memory, and a read only memory (in *Fig. 3C; col. 3, lines; claim 14, Monzel discloses memory 1("first memory type") is a dual port memory, i.e., it could include a dual port random access memory*).

Referring to claim 8, Monzel discloses the method of claim 1, further comprising: programming customer logic by applying a metal layer to the metal programmable device (*col. 4, lines 41-45; Fig. 5, step 506*).

Referring to claim 9, Monzel discloses A metal programmable device, comprising:

an array of programmable cells (*claim 11, first step*);

an array of pre-diffused memory cells (*claim 11, second step*); and

a plurality of memory interface control blocks , wherein each memory interface control block accesses the pre-diffused memory cells as a different memory type (*in*

Abstract; Fig. 3E, col. 4, lines 23-50, Monzel discloses a plurality of peripheral logic blocks (" memory interface control block") may be used to configured to access the core memory cell as various memory types).

Referring to claim 10, Monzel discloses the metal programmable device of claim 9, further comprising:

a metal layer connecting a first memory interface control block from within the plurality of memory interface control blocks to a first portion of the memory cells (*claim 17*),

wherein logic within the array of programmable cells accesses the first portion of the memory cells as a first memory type using the first memory interface control block (*claim 17*).

Referring to claim 11, Monzel discloses the metal programmable device of claim 10, wherein the metal layer connects a second memory interface control block from within the plurality of memory interface control blocks to a second portion of the memory cells and wherein logic within the array of programmable cells accesses at least a second portion of the memory cells as a second memory type using the second memory interface control block (*claim 17*).

Referring to claim 12, Monzel discloses the metal programmable device of claim 10, wherein the first memory type is one of a single port random access memory, a dual port random access memory, and a read only memory (*in Fig. 3C; col. 3, lines; claim 14, Monzel discloses memory 1("first memory type") is a dual port memory, i.e., it could include a dual port random access memory*).

Referring to claim 13, Monzel discloses the metal programmable device of claim 10, wherein the metal layer programs customer logic within the array of logic programmable cells (*col. 4, lines 41-45; Fig. 5, step 506*).

Referring to claim 14, Monzel discloses the metal programmable device of claim 10, wherein the metal layer configures at least a portion of the plurality of pre-diffused memory cells (*claim 13*).

Referring to claim 17, Monzel discloses the metal programmable device of claim 9, wherein the plurality of memory interface control blocks are pre-diffused in the

metal programmable device (in col. 2, lines 60-61, *Monzel discloses some memory peripheral circuits, "memory interface control blocks" may be pre-diffused on the device*).

Referring to claim 18, Monzel discloses the metal programmable device of claim 9, wherein each memory interface control block within the plurality of memory interface control blocks has contact points on the surface of the metal programmable device (*col. 4, lines 42-45, **Monzel** discloses "the metal programmable device can be programmed with the custom logic and specialized memory configurations" simply by applying appropriate metal layer. The interface logic elements, " the control block", must have the contact points on the surface of a metal programmable device in order to make connections during programming process)*.

Allowable Subject Matter

Claims 5-6 and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5, 6, 15, and 16 would be allowable because the prior art of record does not teach or fairly suggest the limitations in:

(Claims 5 and 15)

wherein the array of pre-diffused memory cells is an array of 6T memory cells .

(Claims 6 and 16)

wherein the first memory interface control block and at least one other memory interface control block within the plurality of memory interface control blocks share components .
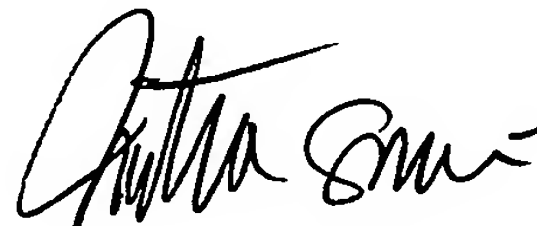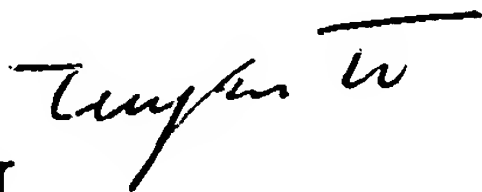
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen To whose telephone number is (571) 272-8319. The examiner can normally be reached on 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER